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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/816,325 | 03/26/2001 | Takeshi Asakura | 3673-105P | 8564 |

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EXAMINER

EDWARDS, PATRICK L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2621

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,325

Applicant(s)

ASAKURA, TAKESHI

Examiner

Patrick L Edwards

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama (USPN 6,458,035) in view of Gobush et al. (USPN 5,471,383).

With regard to claim 5, which is representative of claim 1, Katayama discloses a camera for photographing a flying sphere having printed thereon a central recognition mark (Katayama col. 1 lines 56-62). Katayama further discloses that this recognition mark has a directivity (Katayama col. 3 lines 55-65). Page 6 of the applicant's disclosure cites an isosceles triangle (like the one disclosed in Katayama) as a shape having directivity (as recited in the claim). Katayama further discloses that the two photographs are taken at predetermined time interval (Katayama col. 2 lines 38-42).

Katayama further discloses storage means for recording data on two static images (Katayama col. 3 line 9).

Katayama further discloses operation means for comparing the data on the two static images and calculating a rotating angle of the sphere based on the recognition mark (Katayama col. 1 lines 55-57).

Katayama fails to expressly disclose that the central mark is surrounded by three or more rotating angle calculating marks. Gobush, however, discloses a central mark which is surrounded by more than three rotating angle calculating marks (Gobush Figure 8). It would have been obvious to one reasonably skilled in the art at the time of the invention to surround Katayama's directive central mark with three or more rotating angle calculating marks as taught by Gobush. Such a modification would have allowed for

Art Unit: 2621

a rotation measurement device with additional marks that would have aided in the calculation of the amount of rotation (Gobush col. 13 lines 15-21).

With regard to claim 2, Gobush discloses spacing the rotating angle calculating marks two spaces apart from the center mark (see Figure 8). Gobush further discloses that these spaces have diameters of approximately 0.1-0.2 inches (or 2.5-5.1 mm). A multiplication operation shows that Gobush discloses spacing the rotating angle calculating marks from the central mark such that the distance between their respective center positions is within the range recited in the claim.

With regard to claim 3, it would have been an obvious matter of design choice to modify Katayama's directive central mark such that it was constituted by a rectangle and a circle provided apart from the rectangle adjacently to one of the short sides of the rectangle, since applicant has not disclosed that having a central mark with this configuration solves any stated problem or is for any particular purpose and it appears that the measuring device would perform equally well if the directive central mark had another shape.

Allowable Subject Matter

3. Claim 4 is allowed.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
Katayama (USPN 6,042,483).
Ohshima et al. (USPN 6,226,416).
Mitoma et al. (USPN 5,611,723).
Sciandra et al. (USPN 6,327,380).

Art Unit: 2621

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick L Edwards whose telephone number is (703) 305-6301. The examiner can normally be reached on 8:30am - 5:00pm M-F.

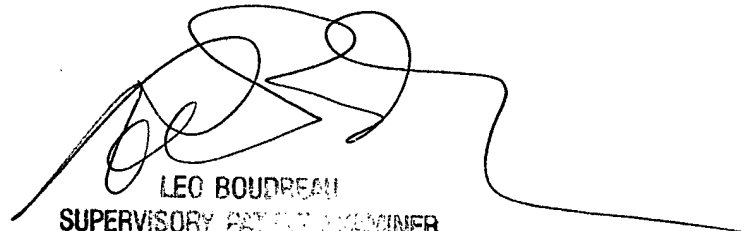
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Patrick Lynn Edwards

Art Unit 2621

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LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
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